Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Acetone, ACS	
NCL Catalog Number	**A-12M**	
Product Description	Laboratory chemical	
Manufacturer	EMD Chemicals Inc.	PO Box 70, 480 Democrat Road Gibbstown, NJ 08027
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification

Flammable Liquids	Category 2
Eye Irritation	Category 2A
Specific Target Organ Toxicity	Single Exposure Category 3

Signal Word Danger

Hazard Statements

H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary Statements

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing fume/vapors/spray.
P264	Wash exposed skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to comply with federal, state, and local regulations.

Other Hazards Not Contributing to the Classification

Repeated exposure may cause skin dryness or cracking.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Name	CAS #	Approximate %
Acetone	67-64-1	100

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures — Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

If Inhaled — Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

In Case of Skin Contact — Remove all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

In Case of Eye Contact — Rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

If Swallowed — Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

Most Important Symptoms/Effects Acute and Delayed

After Inhalation — Exposure to high concentrations: Feeling of weakness. Irritation of the respiratory tract. Nausea. Vomiting. Headache. Central nervous system depression. Dizziness. Narcosis. Excited/restless. Drunkenness. Disturbed motor response. Respiratory difficulties. Disturbances of consciousness.

After Skin Contact — Dry skin. Cracking of the skin.

After Eye Contact — Irritation of the eye tissue.

After Ingestion — Dry/sore throat. Risk of aspiration pneumonia. Symptoms similar to those listed under inhalation. After absorption of high quantities: Irritation of the gastric/intestinal mucosa. Change in the haemogramme/blood composition. Change in the urine output. Affection of the renal tissue. Enlargement/affection of the liver.

Chronic Symptoms — Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media — Alcohol resistant foam. Dry powder. Water spray. Polyvalent foam. BC powder. Carbon dioxide.

Unsuitable Extinguishing Media — Do not use a heavy water stream.

Special Hazards Arising from the Chemical — Highly flammable. Gas/vapor flammable with air within explosion limits. May be ignited by sparks. Violent to explosive reaction with many compounds. On exposure to light, can release harmful gases/vapors. Reacts violently with strong oxidizers, peroxidation resulting in increased fire or explosion risk.

Special Protective Actions for Fire-Fighters — Wear self-contained breathing apparatus and protective clothing. Keep exposed containers cool with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment (see section 8). Evacuate area of non-essential personnel. Eliminate ignition sources. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental Precautions	Prevent entry to sewers and public waters.
Methods and Materials for Containment and Cleaning Up	Collect spillage with inert absorbent material. Store away from other materials. Wash clothing/equipment after handling. Ensure compliance with federal, state, and local regulations.

SECTION 7: HANDLING AND STORAGE

Handling and Storage

Precautions for Safe Handling	Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Conditions for Safe Storage Including any Incompatibilities	Keep in a tightly closed container, stored in a cool, dry, ventilated area. Store away from sunlight, which can contribute to instability. Store away from: strong bases, strong acids, oxidating agents, reducing agents, halogens, and amines.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Acetone (67-64-1)		
USA ACGIH	ACGIH TWA (ppm)	500 ppm
USA ACGIH	ACGIH STEL (ppm)	750 ppm
USA OSHA	OSHA PEL (TWA) (mg/m^3)	2400 mg/m^3
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Individual Protection Measures

Avoid all unnecessary exposure.

Skin Protection	Butyl-rubber gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.
Eye Protection	Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.
Respiratory Protection	Wear appropriate mask.
Other Information	Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Colorless
Odor	Aromatic odor
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	-95°C/Not available
Initial Boiling Point and Boiling Range	56°C
Flash Point	-18.0°C
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	13% (V) / 2% (V)
Vapor Pressure	245.3 hPa (184.0 mmHG) at 20.0°C

Vapor Density	Not determined
Relative Density	0.791 g/cm^3 at 25°C
Solubility	Completely miscible
Partition Coefficient: n-octanol/water	Log Pw: -0.24
Auto-Ignition Temperature	465°C
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No data available.
Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	Vapors may form explosive mixture with air.
Conditions to Avoid	Extremely high or low temperatures. Heat and sunlight can contribute to instability.
Incompatible Materials	Bases, oxidizing agents, reducing agents. Acetone reacts violently with phosphorous oxychloride.
Hazardous Decomposition Products	Fumes, carbon monoxide, carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity Not classified

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg
LD50 dermal rabbit	20000 mg/kg
LC50 inhalation rat (mg/l)	71 mg/l/4h (76 mg/l/4h)
LC50 inhalation rat (ppm)	30000 ppm/4h

Skin Corrosion/Irritation	Not classified
Serious Eye Damage/Irritation	Causes serious eye irritation.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	May cause drowsiness or dizziness.
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified
Potential Adverse Human Health Effects and Symptoms	No data available
Symptoms/Injuries After Inhalation	Feeling of weakness. Irritation of the respiratory tract. Nausea. Vomiting. Headache. Central nervous system depression. Dizziness. Narcosis. Excited/restlessness. Drunkenness. Disturbed motor response. Respiratory difficulties. Disturbances of consciousness.
Symptoms/Injuries After Skin Contact	Dry skin. Cracking of the skin.
Symptoms/Injuries After Eye Contact	Irritation of the eye tissue.
Symptoms/Injuries After Ingestion	Dry/sore throat. Risk of aspiration pneumonia. Symptoms similar to those listed under inhalation. Irritation of the gastric/intestinal mucosa. Change in the haemogramme/blood composition. Change in urine output. Affection of the renal tissue. Enlargement/affection of the liver.
Chronic Symptoms	Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Acetone (67-64-1)	
LC50 fishes 1	6210 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	8800 mg/l (48 h; Daphnia pulex)
LC50 fish 2	5540 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	13000 ppm (96 h: Gambusia affinis)
TLM fish 2	>1000 ppm (96 h: Pisces)
Threshold limit other aquatic organisms 1	3000 mg/l (Plankton)
Threshold limit other aquatic organisms 2	28 mg/l (Protozoa)
Threshold limit algae 1	7500 mg/l (Scenedesmus quadricauda; pH=7)
Threshold limit algae 2	3400 mg/l (48 h; Chlorella sp.)

Persistence and Degradability Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No data on mobility of the substance available.

Bioaccumulative Potential Not bioaccumulative.
BCF fish 1: 0.69 (Pisces)
BCF other aquatic organisms: 3
Log Pow: -0.24

Mobility in Soil Surface Tension: 0.0237 N/m

Other Adverse Effects Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations Dispose of contents/containers in accordance with federal, state, and local regulations.

Ecology-Waste Materials Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number UN1090

UN Shipping Name Acetone

Transport Hazard Class(es) 3-Flammable liquids

Packing Group II

Environmental Hazards Not applicable

Transport in Bulk Not applicable

Special Precautions Not applicable

SECTION 15: REGULATORY INFORMATION

Acetone (67-64-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Reportable Quantity	5000 lb

SECTION 16: OTHER INFORMATION

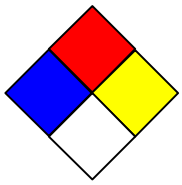
Revision Date: 01/05/2015

NFPA Hazards

Health Hazard 1: Exposure would cause irritation with only minor residual injury.

Fire Hazard 3: Liquids and solids that can be ignited under almost all ambient temperature conditions.

Reactivity/Instability 0: Normally stable, even under fire exposure conditions, and is not reactive with water.



HMIS III Rating

Health	1: Irritation or minor reversible injury possible.
Flammability	3: Materials capable of ignition under almost all normal temperature conditions.
Physical Hazard	0: Materials that are normally stable.
Personal Protection	C

A-12M	
Health	1
Flammability	3
Physical Hazard	0
Personal Protection	C

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END OF SAFETY DATA SHEET